

PATENT COOPERATION TREATY

PCT


INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 24 MAY 2006

WIPO PCT

Applicant's or agent's file reference P18290PC00/sko		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/NO2005/000061		International filing date (day/month/year) 18.02.2005		Priority date (day/month/year) 20.02.2004
International Patent Classification (IPC) or national classification and IPC INV. G01N21/95				
Applicant RENEWABLE ENERGY CORPORATION ASA et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 19.12.2005		Date of completion of this report 24.05.2006		
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized officer Heising, S Telephone No. +31 70 340-3785		



**INTERNATIONAL PRELIMINARY REPORT
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International application No.
PCT/NO2005/000061

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-7 as originally filed

Claims, Numbers

1-21 filed with the demand

Drawings, Sheets

1/5-5/5 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-21
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-21
Industrial applicability (IA)	Yes: Claims	1-21
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: US-A-5 757 474 (SOPORI ET AL) 26 May 1998 (1998-05-26)

D2: WO 02/077621 A (AOTI OPERATING COMPANY, INC; HIGGS, VICTOR) 3 October 2002 (2002-10-03)

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 and 11 does not involve an inventive step in the sense of Article 33(3) PCT.

2.1 The document D1 is regarded as being the closest prior art to the subject-matter of claim 1 and discloses (the references in parentheses applying to this document):

A method for taking pictures of polycrystalline wafer and photovoltaic devices (abstract), where the images are treated by an image recognition software (column 10, lines 55-66), suitable for comparing them.

2.2 D1 talks about measuring polycrystalline wafers and photovoltaic devices. The person skilled in the art knows that photovoltaic devices are achieved by processing wafers, which in turn are diced from an ingot. Therefore the steps of manufacturing wafers from an ingot and processing wafers to yield photovoltaic devices is implicitly disclosed in D1.

2.3 The subject-matter of claim 1 therefore differs from this known characterizing method in that no comparison of images before and after processing is done.

2.4 Document D2 discloses the use of a defect characterizing and classification system to study the influence of crystal growth (ie the ingot) history and (thermal) history in the processing (page 1) to defects formation. To see whether new defects like grain boundaries arise due to wafer processing can only be done by comparing defect maps before and after processing. So the comparison is implicitly and unambiguously disclosed in D2.

2.5 Therefore the subject-matter of claim 1 does not involve an inventive step (Article 33(3) PCT).

2.6 The same applies mutatis mutandis to the system for doing the characterization. Therefore the subject-matter of claim 11 does also not involve an inventive step in the sense of Article 33(3) PCT.

3. Dependent claims 2 - 10 and 12 - 21 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT).

3.1 Document D1 discloses the technical features of claims 2 (abstract and figure 10) and 20 (figure 1)

3.2 Document D2 discloses the technical features of claims 2 (pages 1 and 2), 4 (page 1), 6 (page 1) 7, 18 (pages 12), 8 (pages 7 and 11-12), 9, 10 (page 1), 14 (page 1), 16 (page 1), 17 (page 12; PL and visible light).

3.3 The subject-matter of claims 3, 5, 6, 8, 10 relate to standard procedures in quality control which (almost) all silicon based manufacturers have in place. Hence including such features cannot make the subject-matter of a claim inventive as these procedures would be contemplated by the person skilled in the art.

In addition claims 6 and 10 characterize the method only by the results to be achieved instead of clearly indicating the method steps needed to achieve these results. This is in contradiction to the requirements of clarity in Article 6 PCT.

3.4 As the documents D1 and D2 include a computer in their inspection systems, they are adopted to execute software which can be used on a computer. Thus the subject-matter of claims 12 - 14 and 19 - 21 is automatically disclosed and cannot any technical features to the claims they depend on.

3.5 Claim 15 refers to a method of solar cell production instead of defining its system. This is in contradiction to the clarity requirements of Article 6 PCT. As the corresponding

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method is already claimed (claim 5) it cannot add any subject-matter if correctly reformulated as method claim.

Therefore the subject-matter of claims 2 - 10 and 12 - 21 does not involve an inventive step as required by Article 33(3) PCT.